ASSESSING MATHEMATICAL COMPETENCE OF JUNIOR HIGH SCHOOL STUDENTS AT BAGAMANOC RDHS: BASIS FOR INTERVENTION

A Completed Action Research Report Funded by
Basic Education Research Fund (BERF)
Submitted to the Region Research Committee (RRC)
Department of Education - Regional Office V
Legazpi City, Albay

through the

Schools Division Research Committee (SDRC)
Schools Division Office of Catanduanes
Virac, Catanduanes

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A B S T R A C T

DE JESUS, ERWIN G. “ASSESSING MATHEMATICAL COMPETENCE OF JUNIOR HIGH SCHOOL STUDENTS AT BAGAMANOC RDHS: BASIS FOR INTERVENTION” (Action Research, Bagamanoc Rural Development High School, Bagamanoc, Catanduanes).

Date of TA: **June 24, 2024**

This BERF funded action research aimed to help the Mathematics teachers at the school prepare a more suitable strategy or intervention to help increase the students’ performance in the subject. Its focus was on determining the least learned skills of junior high school students of Bagamanoc RDHS in Mathematics which served as the base line and guide in crafting the content of Math Remedial Classes and other interventions that the researcher proposed after the conduct of the study. The study specifically sought answers to the following questions: (1) What is the Pre-Test Performance of Junior High School Students in Mathematics at Bagamanoc RDHS for SY 2022 – 2023? (2) What is the Post-Test Performance of Junior High School Students in Mathematics at Bagamanoc RDHS for SY 2022 – 2023? (3) What are the least mastered Mathematics skills among Grade 7, Grade 8, Grade 9, and Grade 10 students for the school year 2022 – 2023? (4) Based on the assessment results, what appropriate interventions can be implemented to address any identified issues?

The research employed a strategy akin to Documentary Analysis, utilizing the 2023 Numeracy Assessment Test results via e-NAT, an application originating from SDO Albay known as ALNAT. The results of the study showed that the least learned skills of the students for S.Y. 2022- 2023 were *proving and decision making* for grades 7 and 8, *applying and connecting* for grade 9 and *estimating* for

grade 10. The post test results further revealed that one hundred percent of students from grades 9 and 10 has a skill level that *needs major* support in as far as the numeracy skills in Mathematics is concerned.

The impact of pandemic to the performance of students was so glaring in these results which made the researcher suggest for the following interventions (1) Include in the Mathematics Department's Development Plan a Remedial Class highlighting the identified least learned skills per grade level (2) Conduct at least one day Math Camp with contents that focused on the identified least learned skills (3) Include in the daily lessons or lectures a strategy that will help improve the students' performance on the identified least mastered skills like employing a Super-Item type of exam with at least three to four different level of questions (unistructural, multi-structural, relational, extended abstract level) (4) Encourage and engage the learners in creating their own learning materials like device, games and puzzle to improve their performance and increase their participation in the subject.

ACKNOWLEDGEMENT

Just like any piece of art, many elements are needed to come up with a masterpiece. Similarly, this research has been made possible to become a masterpiece because of those individuals who extended their help. The researcher expresses his sincerest gratitude to them.

Ms. Aroline T. Borja, EPS-SGOD for her meaningful inputs and caring support which contributed to the completion of this research;

Dr. Floren P. Clavo , SEPS-PRS for his honest suggestions, patience and informative ideas;

Mr. Rey Bonayon, EBEIS, for his constant reminders and help, and for taking care of our papers needed in the region;

Basic Education Research Fund, thru **Dr. Gilbert T. Sadsad**, DepEd Regional Director, for the support fund used in the conduct of this study and for the opportunity to become one of the benefactors;

Mrs. Milagros V. Lim, school principal, for her encouragement, support and understanding which led to the success of the different activities done related to this study;

Mrs. Jenny E. Cabrera, academic head, for her insights and suggestions needed to improve further this research;

Ms. Loraine Ann M. Santos, English teacher, for helping the researcher improve the grammars and language used in this study;

Mrs. Rudeth T. de Jesus, for always taking care of the researcher's needs and for being an inspiration to him and to their children;

BRDHS Mathematics Teachers, Mrs. Thelma C. Borja, Mrs. Melanie M. Bien and Mr. Mark Efren S. Tayas Jr. for being a part of the journey, and for the happy and meaningful collaborations all throughout the conduct of the study;

BRDHS Students, SY 2022- 2023, the ultimate benefactor of this study, for their cooperation and patience.

To them all, my heartfelt thanks.

And above all, the **Greatest Creator and Master of all the Masterpieces**, for the many blessings and joy showered upon him and his family.

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I. **CONTEXT AND RATIONALE**

In the field of education, intervention happens when teachers introduce a new or different teaching approach in the classroom, and then compare it to a conventional teaching method. Usually, this is done by looking at outcomes that are of interest, such as student gains (Levin & O'Donnell, 1999). However, it would be best to identify first the most needed skills of the learners, specifically in Mathematics to come up with the best possible intervention or solution to the problem.

In DepEd Order No. 12, S. 2015 which talks about the Guidelines on the Early Language, Literacy, and Numeracy Program for Professional Development Component, it was explained that "the program will develop in Filipino children literacy and numeracy skills and attitudes which will contribute to lifelong learning". This is the same dream that the researcher wishes to see in our learners, and the very reason in pursuing this action research.

On the other hand, DepEd Order No. 55, S. 2016 or the "Policy Guidelines on the National Assessment of Student Learning for the K to 12 Basic Education Program", defined assessment as the process of measuring learners' progress in the attainment of learning standards and 21st century skills. The results of the various forms of assessment shall be used to quantify judgments on learners' academic performance. The same DepEd Order reiterates that the national assessment of student learning is an integral part of DepEd's assessment framework which aims to assess the effectiveness and efficiency of the delivery of

education services using learning outcomes as indicators. This policy guidelines also aims to provide information that will guide decisions on instructional practices and in determining if the learners are meeting the learning standards of the curriculum.

The Philippines is still way behind the world in Mathematics according to the results of Programme for International Student Assessment (PISA) released in 2018 and 2022 where we ended second lowest and sixth lowest respectively. PISA is a respected and reliable international assessment that measures the reading, mathematical and scientific abilities of fifteen years old learners. This outcome even triggered the researcher to do something on his capacity to help improve these results, thus leads to the conduct of this research.

Furthermore, the Schools Division Office of Catanduanes, Mathematics Department conducted a "*Division Virtual Orientation-Workshop on the Utilization of Appropriate Numeracy Tools for the Beginning of School Year Numeracy Assessment and Submission of Consolidated Grade Level ALNAT Report*" last September 3, 2022, through the leadership of our Education Program Supervisor in Mathematics, Mr. Jezrahel T. Omadto. The needed data to accomplish the said numeracy assessment will come from the pre-test and post-test of all the students in the school from Grade 7 to Grade 10. These data need to be encoded manually in the so-called e-NAT drive and is quite a tedious job for us, teachers. One of the highlights of the said orientation-workshop is to conduct research out of the data that we can gather from the learners. Considering the time and efforts that we will

be exerting for this purpose, the researcher decided to maximize the data that we will be gathering and make research out of it for the benefit of our learners, thus leads to this Action Research Proposal.

Currently, our school conducts a Math Remedial Class for identified Grade 7 learners who are at risk of failing the subject because of their learning difficulty to understand the subject. However, for the rest of the regular students at the school, we do not have a specific intervention being conducted yet to help them do better in Mathematics. It is the intention of the researcher to extend the intervention to the rest of the students in the school, but we will be needing base line data to know where to start and what to focus on in helping them perform better in the subject.

With this action research, the researcher is expected to have a base line on the actual performance of the learners in Mathematics, specially that the students were in pure Modular Distance Learning in the past two school years. The actual score of the learners in the post test will serve as our basis and reference in designing an intervention to test its effectiveness later. Also, included in this research is identifying the least learned skills of the students in Mathematics that will further help us determine specific skills which shall be given more attention to improve the students' performance. According to the K to 12 Mathematics Curriculum Guide, the twin goals of Mathematics in the basic education levels are critical thinking and problem solving while the specific skills and processes to be developed are: knowing and understanding; estimating, computing, and solving;

visualizing and modeling; representing and communicating; conjecturing, reasoning, proving and decision-making; and applying and connecting. The least learned skills of each section in every grade level will be revealed in the interpretation of the results of the students' post-test by the end of the school year 2022-2023. This will be a great help for all the teachers at this school since we will be able to determine what specific Mathematics skills to focus on and thus create a more fitted solution or intervention to the problem.

II. INNOVATION, INTERVENTION, STRATEGY

To effectively solve any problem, it is essential to first identify the root issue. We, Mathematics teachers are known to be good problem solvers and critical thinkers. Thus, this study helped the mathematics teachers at the school in preparing a more appropriate strategy or intervention to help increase the students' performance in the subject. This action research focused on determining the least learned skills of junior high school students of Bagamanoc RDHS which served as the base line and guide in crafting the content and focus of Math Remedial Class that Mathematics teachers proposed after the conduct of the study. However, the acceptability of the crafted content of Math Remedial Class and other interventions suggested are no longer be part of the study, thus, those are part of its delimitation.

The approach employed in this study to collect necessary data resembles Root Cause Analysis, but it utilizes the results from the 2023 Numeracy Assessment Test with the aid of e-NAT, an application that originated from Schools

Division Office of Albay, also known as ALNAT or Albay Numeracy Assessment Tools. The root cause analysis assisted the researcher in identifying the reasons behind the students' Math performance during the school year 2022 – 2023 and subsequently devising actions to mitigate the identified problems.

The results of ALNAT can identify the performance of a student which is categorized as the following:

Table 1

Numeracy Skills Level

Numeracy Skills Level	Scale
Needs Major Support (NMS)	74% and below
Anchoring (A)	75% - 79%
Emerging (E)	80% - 84%
Developing (D)	85% - 89%
Transforming (T)	90% and above

Those students who fall under the level that "Needs Major Support" are the priority students on the list of the proposed Math remediation.

Aside from the numeracy skills level, the results also revealed the least learned skills of the students, which is also a must needed data to draw conclusion and plan for the best teaching strategy possible to help our learners. These skills include knowing and understanding; estimating, computing, and solving; visualizing and modeling; representing and communicating; conjecturing, reasoning, proving and decision-making; and applying and connecting.

The following are the interventions that the researcher highly recommends:

(1) include in the Mathematics Department's Development Plan a Remedial Class highlighting the identified least learned skills per grade level;

(2) conduct at least one day Math Camp with contents that focused on the identified least learned skills;

(3) include in the daily lessons or lectures a strategy that will help improve the students' performance on the identified least mastered skills like employing a Super-Item type of exam with at least three to four different level of questions (unistructural, multi-structural, relational, extended abstract level);

(4) encourage learners to create their own learning materials like device, games, and puzzle to improve their participation and performance in the subject.

III. **ACTION RESEARCH QUESTIONS**

The main objective of this study was to assess the mathematical competence of junior high school students at Bagamanoc RDHS and made this data as the basis for proposed interventions to help improve their performance. Specifically, it sought answers to the following questions:

1. What is the Pre-Test Performance of Junior High School Students in Mathematics at Bagamanoc RDHS for SY 2022 – 2023?
2. What is the Post-Test Performance of Junior High School Students in Mathematics at Bagamanoc RDHS for SY 2022 – 2023?
3. What are the least mastered Mathematics skills among Grade 7, Grade 8, Grade 9, and Grade 10 students for the school year 2022 – 2023?

4. Based on the assessment results, what appropriate interventions can be implemented to address any identified issues?

IV. **ACTION RESEARCH METHODS**

The participants, data gathering methods and data analysis plan of this action research were as follows:

A. Participants and/or other Sources of Data and Information

All four Mathematics teachers at the junior high school helped in implementing this research. They were all informed about the conduct of the study and the possible benefits that we can get from its results. The participants also include Junior High School students of Bagamanoc RDHS whose anonymity will remain in accordance with the code of ethics in conducting research. A parental consent was also secured for the student-participants to inform their respective parents about the conduct of the study. The students' participation is completely voluntary, and they are free to decline their participation at any time even after the parental consent was already signed as stated on the parental consent letter. 100% of the 161 grade 10 students participated in the conduct of ALNAT 2023, 144 out of 150 or 96% of the grade 9 learners participated, 150 out of 172 or 87.21% participation in grade 8, and 125 out of 135 or 92.59% participated in grade 7. Overall, there were 584 participants of this study out of the expected number, which is 622, and this is equivalent to a high percentage of participation which is 93.89%.

The table below shows the summary of the number of teachers involved, the number of students in each grade level in junior high school, and the actual number of examinees of ALNAT 2023:

Table 2

Action Research Participants

Category	Expected Number of Participants	Actual No. of Participants	Percentage of Participation
JHS Math Teachers	4	4	100%
JHS Students			
Grade 7	135	125	92.59%
Grade 8	172	150	87.21%
Grade 9	150	144	96 %
Grade 10	161	161	100%
Total	**622**	**584**	**93.89%**

B. Data Gathering Methods

This descriptive type of action research utilized documentary analysis where in the results of the pre-test and post-test of the learners from the Schools Division Numeracy Assessment were used. The data gathered were interpreted to determine if in which Numeracy Skills Level the students fall, and to identify their least learned skills in Mathematics subject. The electronic Numeracy Assessment Tools (e-NAT) that was utilized in this research are spreadsheet files, designed using Microsoft Excel, and allow Math teachers to record and store the test responses of the ALNAT examinees, generate test results, and automatically interpret the examinees' numeracy skills.

The data collected was from the results of the said Numeracy Assessment Test of Junior High School Students of Bagamanoc RDHS from Grades 7 to 10. This Numeracy Assessment Test is a 50-item multiple choice standardized test. The student-participants answered all the 50 items questions (pen-and-paper test) by choosing the correct answer from the four choices provided (multiple choice type of test). The coverage of the test is the Most Essential Learning Competencies (MELC) covered by each respective grade level for one whole school year as prescribed by DepEd, answerable within 60-minute period.

The pre-test was done at the start of School Year 2022 – 2023 (September 2022) while the post-test was conducted at the end of the same school year (June 2023). All the student-participants took the test and the respective Math teacher of each section in each grade level administered the test to ensure its accuracy and genuine results/ outcome. The answers of the learners were then entered manually to the electronic NAT tool where the results and interpretation can be seen automatically.

The Education Program Supervisor in Mathematics from SDO Catanduanes was informed about the conduct of this research and how the results of the Numeracy assessment will be used for this action research.

C. Data Analyses

The data collected in this action research were interpreted and analyzed utilizing Albay Numeracy Assessment Tools or ALNAT, an electronic tool

containing both the questionnaires and their corresponding results interpretation. The questionnaires cover the Department of Education's Most Essential Learning Competencies (MELC) from first to fourth grading periods. This ALNAT is a numeracy assessment tool validated by the University of the Philippines National Institute of Science and Mathematics Education (UPNISMED) and the Bicol University College of Education (BUCE) collaborated with content and IT experts in the Division of Albay and other agencies.

To interpret the results of the students' answers on the test, an e-Numeracy Card was utilized like that of the Likert Scale Measurements using intervals. The table below shows the 5 numeracy skill levels that a child may have, the scale interval and its corresponding interpretation.

Table 3

Interpretation of Numeracy Skills Level

Numeracy Skills Level	Likert Scale Interval	Interpretation
Needs Major Support (NMS)	74% and below	The learner did not achieve the passing rate of 75% per DepEd Order #8 s. 2015 and majority of the skills and processes are under needs major support.
Anchoring (A)	75% - 79%	The learner has achieved the passing rate, however there are still skills and processes that are under needs major support.
Emerging (E)	80% - 84%	There are skills and processes which are under anchoring, and/or developing, however, there are also skills that are under needs major support.
Developing (D)	85% - 89%	There are skills and processes that are under anchoring, developing, and/or transforming however, there are few skills that are under needs major support.
Transforming (T)	90% and above	Majority of the skills and processes are under transforming. However, few skills and processes are under needs major support, anchoring, emerging and/or developing.

The statistical tool used in computing for the numeracy skill score of the students is the Mean Score Formula:

$$Numeracy\ Skill\ score = \frac{raw\ score}{number\ of\ items} \text{ x } 100$$

Each of the 50 – items standardized test per grade level is composed of different Mathematical Skills such as knowing and understanding, computing and solving, estimating, visualizing and modelling, representing and communicating, conjecturing and reasoning, proving and decision making, and applying and connecting. The number of items of each Mathematical skills varies on each grade level, and the statistical used in determining the least mastered skills of the students is the Mean Score Formula:

$$Least\ Learned\ Skill\ Score = \frac{raw\ score\ on\ specific\ Math\ skill}{number\ of\ items\ of\ the\ given\ Math\ skill}\ x\ 100$$

After determining the students' score on each Math skill, the results are being ranked from the lowest score to the highest score. The lowest score of the students represents the least learned skill of that student-participant. In this research, the top three least learned skills were considered as the base line which served as the researcher's basis in conducting appropriate remediation and intervention in Mathematics in the following school year to come.

V. DISCUSSION OF RESULTS AND REFLECTION

Presented in this part are the results of ALNAT 2023 reflecting the least mastered skills of the students in both pre-test and post-test, the learners' corresponding Math Skill level, and the different suggested interventions that we can use to address the identified problem.

1. Pre-Test Performance of Junior High School Students in Mathematics at Bagamanoc RDHS for SY 2022 – 2023

The results of the pre-test of Grade 7 learners revealed that their average numerical skill rating is only 25.12 % which means that their Mathematical skill level falls under "needs major support" category. The same Mathematical skill level which is "needs major support" was gained by Grade 8, Grade 9, and Grade 10 whose average numerical skills were 24.66%, 29.72% and 22.12% respectively. The average rating for the pre-test of the four grade levels is only 25.40%. These scores are way too far from the next Math Skill Level which is "Anchoring" which requires a rating of 75 to 79%.

Table 4

Pre-Test Results of JHS for ALNAT, SY 2022-2023

Grade Level	Rating	Skill Level
7	25.12	Needs Major Support
8	24.66	Needs Major Support
9	29.72	Needs Major Support
10	22.12	Needs Major Support
Overall	**25.40**	**Needs Major Support**

2. The Post-Test Performance of Junior High School Students in Mathematics at Bagamanoc RDHS for SY 2022–2023

The Grade 7 students of Bagamanoc RDHS got a rating of 49.28% in their ALNAT post-test with a corresponding numerical skill level that “needs major support”. They almost doubled their rating from the pre-test which is only 25.12% making an increase of 24.16%. For Grade 8, the post-test rating was 60.84%, the highest post-test results among the four grade levels, but still not enough to be excluded in the “needs major support” category. Grade 8 learners has an amazing 36.18% increase from their pre-test which is only 24.66%. Looking at the results of Grade 9 students, they recorded the least increase in the performance rating which is only 3.78%. The post-test rating of Grade 9 is only 33.50% which is the lowest post-test rating as well among the four grade levels. For the Grade 10 students, their post-test rating is 39.42% with an increase of 17.3% compared to their pre-test rating which is only 22.12%. The average post-test rating of all the four-grade level is 45.76% which is equivalent to an increase of 20.36% from the pre-test.

Table 5

Post-Test Results of JHS for ALNAT, SY 2022-2023

Grade Level	Rating	Increase from Pre-Test	Skill Level
7	49.28	24.16	Needs Major Support
8	60.84	36.18	Needs Major Support
9	33.50	3.78	Needs Major Support
10	39.42	17.30	Needs Major Support
Overall	**45.76**	**20.36**	**Needs Major Support**

3. The least mastered Mathematics skills among Grade 7, Grade 8, Grade 9, and Grade 10 students for the School Year 2022 – 2023

The focus of discussion of test results for the least mastered skills of the students of BRDHS was on the conducted post-test. The results revealed that the top three least mastered skills of Grade 7 are proving & decision making (22.22%), applying & connecting (38.43%), and visualizing & modelling (43.25%). For Grade 8, the top three least learned skills are proving & decision making (57.20%), computing & solving (58.33%), and knowing and understanding (58.67%). The post test results for Grade 9 revealed that the top three least learned skills are applying & connecting (24.43%), estimating (26.50%), and representing & communication and conjecturing and reasoning (31.00%). For Grade 10, the top three least learners' skills are estimating (12.00%), proving and decision making (31.75%), and visualizing and modelling (40.00%).

These identified top three least mastered skills in Mathematics by grade level was the focus of the Math Remedial Classes conducted during the 3rd and 4th grading period of the current school year, 2023 – 2024.

After computing the average scores of the least mastered skills of the four participating grade levels, it was found out that the top three least learned skills of the students are proving and decision making (35.68 %), estimating (41.63%), and applying and connecting (41.94%). These three Mathematical Skills was the focus of the crafted Mathematics Department's Development Plan approved by the school principal for SY 2023 – 2024.

Table 6

Least Mastered Skills in Post-test of JHS for ALNAT, SY 2022-2023

Numeracy Skills	Grade 7	Grade 8	Grade 9	Grade 10	Average
Knowing & understanding	52.3	58.67	40.62	42.58	48.54
Computing & solving	54.89	58.33	33.25	40.7	46.79
Estimating	54	74	26.5	12	41.63
Visualizing & Modelling	43.25	61.57	34.57	40	44.85
Representing & communicating	50	60.4	31	42	45.85
Conjecturing & Reasoning	46.25	62.33	31	45.67	46.31
Proving & Decision Making	22	57.2	31.75	31.75	35.68
Applying & connecting	38.43	64.64	24.43	40.25	41.94

4. **Appropriate Interventions that can be Implemented to Address Identified Issues**

The following interventions are highly recommended to help increase the performance and participation of learners in Mathematics:

a. Include in the Mathematics Department's Development Plan a Remedial Class highlighting the identified least learned skills per grade level.

Planning is the key towards achieving any goal. The expected output would be more realistic if you know what to focus on. This school year, the concentration of Mathematics Department of Bagamanoc Rural Development High School evolves on increasing the performance of the learners based on their identified least learned skills. The conduct of remedial class is according to the assessment of the teacher teaching a particular grade level as shown on the results of the

recently conducted ALNAT to be done at least once a week. The approved Development Plan of Math Department serves as our blueprint in executing the different strategies that we will use to help increase the performance of the learners in the subject.

b. Conduct at least one day Math Camp with contents that focused on the identified least learned skills.

Holding Mathematics Camp in the school is an avenue of teaching the learners outside the usual classroom setting. It was a proven theory that we learn better if we do the actual execution of the task being required. This is the concept of our One-Day School Based Math Fair where we let the students do the actual measuring and weighing of objects and solving real problems that we made them experience through various related activities. The content of this activity is anchored to the identified top three least learned skills of the learners such as proving & decision making, estimating, and applying & connecting.

c. Include in the daily lessons or lectures a strategy that will help improve the students' performance on the identified least mastered skills like employing a Super-Item type of exam with at least three to four different level of questions (unistructural, multi-structural, relational, extended abstract level).

The application of our training in the recently conducted Division Training on HOTS-PLPs or Higher Order Thinking Skills – Professional Learning Package created a big impact the way we see differentiated activities that we give to our learners. The Super-Item type of test is an example of how to cater the different

needs of our students by giving the same scenario or the same situation with different level of questions. This is one of the techniques that we used to help increase the performance of our students, specially that Mathematics is really a difficult subject to some of them. Giving them questions based on the level of their understanding helped boost their confidence and with the different level of questions provided for them they surely can answer some.

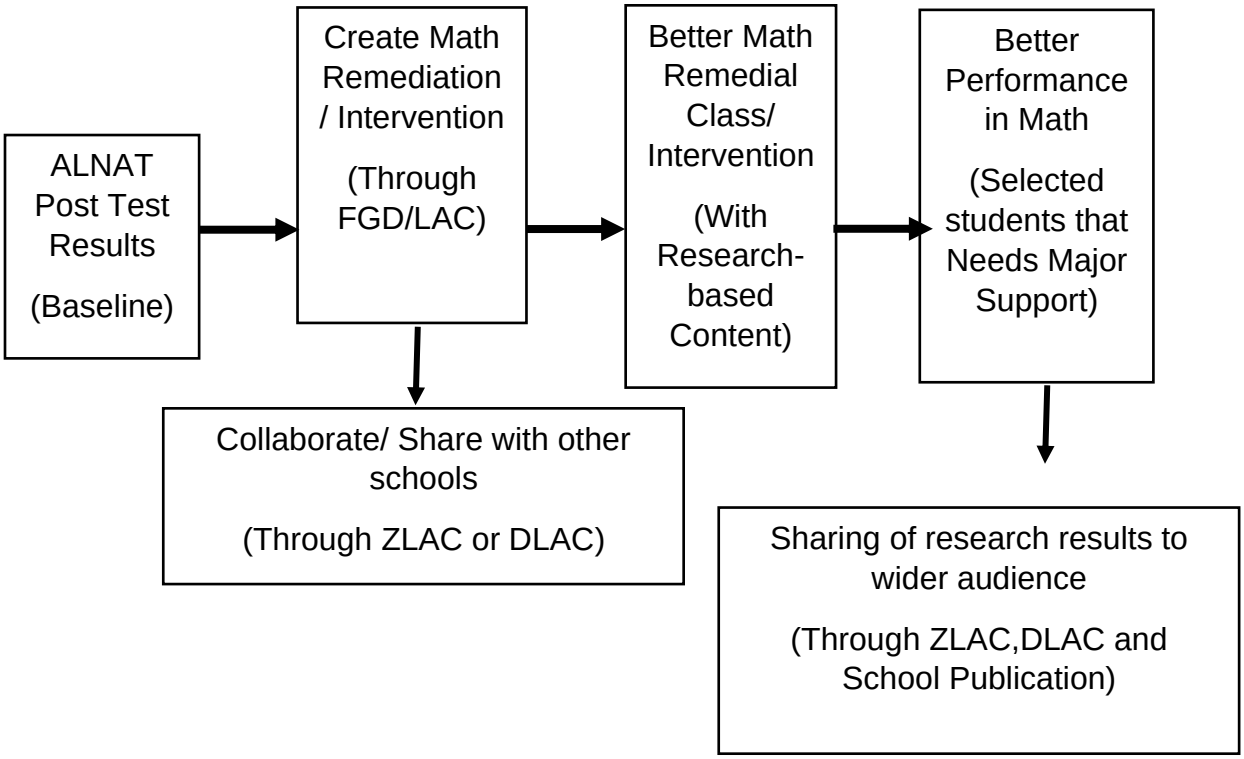
d. Encourage learners to create their own learning materials like device, games, and puzzle to improve their performance in the subject.

To optimize the students' learning outcomes, their active involvement in the teaching-learning process should be maximized. One of the activities which involved their participation is the creation of learning materials that they are most interested in. Considering the age of our learners in Junior High School (13 to 16 years old), it is quite evident that they love to study and learn by group that's why most of their proposed/ created materials are games that involves more than two players. Learning happens not only during class hours but also during those times that they study on their own or by group, just like what they did while they were making and conceptualizing the learning materials that they shared to the class.

VI. Action Plan

Objective	Activity	Timeline	Resources Needed
• To share and discuss the research results to fellow Math teachers/ colleagues and how these findings can be maximized in the school. • To serve as input for other teachers in their respective teaching- learning strategies. • To help the school in intensifying intervention programs to help students at risk of dropping out/ failure.	Learning Action Cells (LACs) Focused Group Discussions (FGDs) In-Service Trainings (In-Sets)	August – December, 2024	Meeting venues Microphone Power point presentations • Chairs and tables • Office supplies
• To share and discuss the research results to the learners of the school and to their parents/ guardians.	General PTA Assembly Inclusion of research implementation and results to the school's publication (The Dawn and Ang Tilaok).	May, 2024	
• To plot a research initiative and encourage other teachers to conduct action research. • To improve quality of education specially in Math subject. • To help increase the number of active researchers in the Division of Catanduanes	Conduct planning meeting with the Division Research Committee Create Research Team for the Division of Catanduanes	August – December, 2024	

Flow Chart for Dissemination, Utilization and Advocacy



VII. References

ALNAT - Albay Numeracy Assessment Tools, SDO Albay.

DepEd Order No. 12, S. 2015.The Guidelines on the Early Language, Literacy, and Numeracy Program for Professional Development Component

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DepEd Order No. 55, S. 2016. The “Policy Guidelines on the National Assessment of Student Learning for the K to 12 Basic Education Program”

K to 12 Curriculum Guide in Mathematics (December 2013)

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VIII. Financial Report

Activity	Cash-out	Balance
Basic Education Research Fund (BERF)		**15,000**
Identify action research topic Formulate action research problems Find external resources that are related to the research questions/ problems	Php 500	14,500
Preparation of action research proposal, intervention material and data gathering instruments	Php 500	14,000
Printing of Pre-Test Questionnaires	PhP 5000	9,000
Submission of Action Research Proposal at DO	Php 500	8,500
Approval of Research Proposal to be funded by BERF	Php 2,000	6,500
Action Research Implementation: Data Gathering; Data Processing; Data Analysis and Interpretation	Php 500	6,000
Printing of Post-Test Questionnaires	Php 5,000	1,000
Submission of the Completed Action Research	Php 1,000	0

Annex 1
LETTER OF INFORMATION FROM THR RRC CHAIRPERSON

Republic of the Philippines
Department of Education
REGION V - BICOL

Office of the Assistant Regional Director

October 13, 2023

ERWIN G. DE JESUS
Master Teacher I
Bagnanoc Rural Development High School
Bagnanoc, Catanduanes

Dear Mr. De Jesus:

This refers to the research proposal duly approved by the Schools Division Research Committee (SDRC) which was favorably submitted to this Office for possible funding under the CY 2023 Basic Education Research Fund (BERF) Grant Facility.

This Office, through the Regional Research Committee (RRC), is pleased to inform you that the research proposal entitled **"ASSESSING MATHEMATICAL COMPETENCE OF JHS STUDENTS AT BAGAMANOC RDHS: BASIS FOR INTERVENTION"**, has been **approved** for implementation following the provisions provided for under DepEd Order No. 16, s. 2017.

In this regard, the processing of tranches for the BERF Facility funding and its deliverables is shown in the table below and shall serve as liquidation documents:

TYPE OF RESEARCH	TRANCHE	PERCENTAGE	DELIVERABLES
ACTION RESEARCH	FIRST TRANCHE	80 %	• Work Plan • Certificate of Acceptance for the Deliverable • Copy of MOA
	LAST TRANCHE	20 %	• Final Report • Certificate of Acceptance from Regional Research Committee (RRC) • Copy of MOA

Kindly take note that in the event that the research proponent failed to complete and submit the deliverables as scheduled, the research proponent shall be required to return the amount granted in full through direct payment or salary deduction within six (6) months.

Further, strict adherence to the provisions of DepEd Order No. 16, s. 2017 dated March 20, 2017 is hereby directed.

For questions and further clarifications, please coordinate with the Regional Research Committee through the Policy, Planning, and Research Division (PPRD).

We look forward to the successful implementation of your research. Thank you.

Very truly yours,

BEBIANO I. SEPTILLAS
Assistant Regional Director
Chair, Regional Research Committee

Annex 2

DECLARATION OF ANTI-PLAGIARISM AND ABSENCE OF CONFLICT OF INTEREST

1. **I, ERWIN G. DE JESUS,** understand that plagiarism is the act of taking and using another's ideas and works and passing them off as one's own. This includes explicitly copying the whole work of another person and/ or using some parts of their work without proper acknowledgment and referencing.

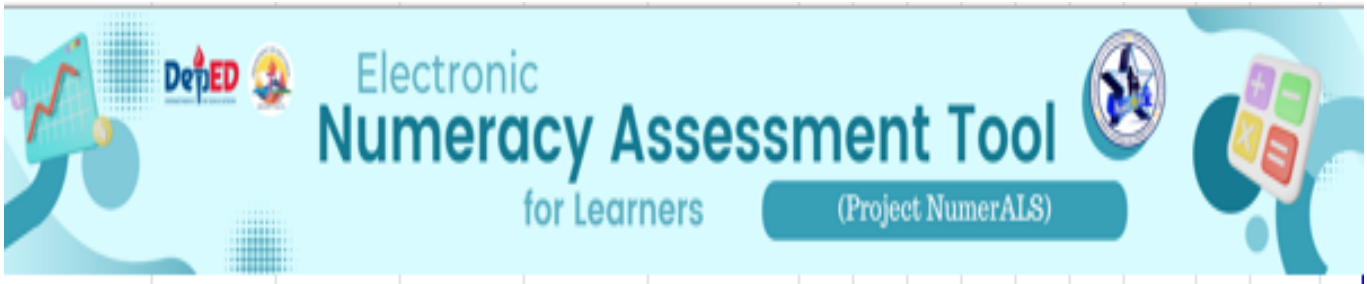
2. I hereby attest to the originality of this research proposal and has cited properly all the references used. I further commit that all deliverables and the final research study emanating from this proposal shall be of original content. I shall use appropriate citations in referencing other works from various sources.

3. I understand that violation from this declaration and commitment shall be subject to consequences and shall be dealt with accordingly by the Department of Education and the Basic Education Research Fund (BERF).

ERWIN G. DE JESUS
Proponent
December 5, 2023

Annex 3.1

e-NAT REPORT FOR GRADE 7



School Name:	BAGAMANOC RURAL DEVELOI	District:	BAGAMANOC SOUTH	School Head:	MILAGROS V. LIM
Math Coordina	MELANIE M. BIEN	Division:	CATANDUANES	Date of Report:	45106

ENAT REPORT FOR GRADE 7

RATING OF NUMERACY SKILL					NUMBER OF LEARNERS PER NUMERACY SKILL LEVEL									
Numeracy Skill	PRE - TEST		POST TEST		Numeracy Skill	PRE TEST					POST TEST				
	Rating	Skill	Rating	Skill		NMS	A	E	D	T	NMS	A	E	D	T
Knowing and Understanding	25.10	NMS	52.30	NMS	Knowing and Understanding	130					107		6		12
Computing and Solving	24.28	NMS	54.89	NMS	Computing and Solving	130					109	5	5	5	1
Estimating	24.00	NMS	54.00	NMS	Estimating	99				31	56				69
Visualizing and Modeling	28.25	NMS	43.25	NMS	Visualizing and Modeling	123	6			1	92	20			13
Representing and Communicatio	26.40	NMS	50.00	NMS	Representing and Communicatio	127		3			92		29		4
Conjecturing and Reasoning	29.00	NMS	46.25	NMS	Conjecturing and Reasoning	125	5				82	32			11
Proving and Decision Making	26.00	NMS	22.00	NMS	Proving and Decision Making	96				34	97				28
Applying and Connecting	22.71	NMS	38.43	NMS	Applying and Connecting	130					0			0	
Overall	**25.12**	**Needs Major Support**	**49.28**	**Needs Major Support**	Overall	130					112	10	3		

Annex 3.2

e-NAT REPORT FOR GRADE 8

School Name:	BAGAMANOC RURAL DEVELOPM	District:	BAGAMANOC SOUTH	School Head:	MILAGROS V. LIM
Math Coordinato	MELANIE M. BIEN	Division:	CATANDUANES	Date of Report:	45106

ENAT REPORT FOR GRADE 8

RATING OF NUMERACY SKILL					NUMBER OF LEARNERS PER NUMERACY SKILL LEVEL									
Numeracy Skill	PRE - TEST		POST TEST		Numeracy Skill	PRE TEST					POST TEST				
	Rating	Skill Level	Rating	Skill Level		NMS	A	E	D	T	NMS	A	E	D	T
Knowing and Understanding	25.33	NMS	58.67	NMS	Knowing and Understanding	167					115	16		15	4
Computing and Solving	19.11	NMS	58.33	NMS	Computing and Solving	167					116	18		15	1
Estimating	22.00	NMS	74.00	NMS	Estimating	131				36	38				112
Visualizing and Modeling	28.43	NMS	61.57	NMS	Visualizing and Modeling	166			1		114			25	11
Representing and Communicating	35.80	NMS	60.40	NMS	Representing and Communicating	157		9		1	100		38		12
Conjecturing and Reasoning	21.00	NMS	62.33	NMS	Conjecturing and Reasoning	166				1	122				28
Proving and Decision Making	18.60	NMS	57.20	NMS	Proving and Decision Making	167					106		30		14
Applying and Connecting	25.45	NMS	64.64	NMS	Applying and Connecting	167					109		27		14
Overall	**24.66**	**Needs Major Support**	**60.84**	**Needs Major Support**	Overall	167					129	9	6	3	3

Annex 3.3

e-NAT REPORT FOR GRADE 9

School Name: **BAGAMANOC RURAL DEVELOP** District: BAGAMANOC SOUTH School Head: MILAGROS V. LIM
Math Coordinat MELANIE M. BIEN Division: CATANDUANES Date of Report: 45106

ENAT REPORT FOR GRADE 9

RATING OF NUMERACY SKILL				
Numeracy Skill	PRE - TEST		POST TEST	
	Rating	Skill	Rating	Skill
Knowing and Understanding	35.69	NMS	40.62	NMS
Computing and Solving	29.58	NMS	33.25	NMS
Estimating	28.50	NMS	26.50	NMS
Visualizing and Modeling	30.43	NMS	34.57	NMS
Representing and Communicatio	18.00	NMS	31.00	NMS
Conjecturing and Reasoning	28.50	NMS	31.00	NMS
Proving and Decision Making	28.75	NMS	31.75	NMS
Applying and Connecting	24.86	NMS	24.43	NMS
Overall	**29.72**	**Needs Major Support**	**33.50**	**Needs Major Support**

NUMBER OF LEARNERS PER NUMERACY SKILL LEVEL										
Numeracy Skill	PRE TEST					POST TEST				
	NMS	A	E	D	T	NMS	A	E	D	T
Knowing and Understanding	143		1			143	1			
Computing and Solving	144					142	2			
Estimating	131				13	139				5
Visualizing and Modeling	143			1		143			1	
Representing and Communicatio	143				1	144				
Conjecturing and Reasoning	135				9	140				4
Proving and Decision Making	138	6				121	21			2
Applying and Connecting	144					144				
Overall	144					144				

Annex 3.4

e-NAT REPORT FOR GRADE 10

School Name:	BAGAMANOC RURAL DEVELOPM	District:	BAGAMANOC SOUTH	School Head:	MILAGROS V. LIM
Math Coordinato	MELANIE M. BIEN	Division:	CATANDUANES	Date of Report:	45106

ENAT REPORT FOR GRADE 10

RATING OF NUMERACY SKILL					NUMBER OF LEARNERS PER NUMERACY SKILL LEVEL									
Numeracy Skill	PRE - TEST		POST TEST		Numeracy Skill	PRE TEST					POST TEST			
	Rating	Skill Level	Rating	Skill Level		NMS	A	E	D	T	NMS	A	E	D	T
Knowing and Understanding	21.58	NMS	42.58	NMS	Knowing and Understanding	161					142	9	7		3
Computing and Solving	13.00	NMS	40.70	NMS	Computing and Solving	161					152		7		2
Estimating	26.00	NMS	12.00	NMS	Estimating	152				9	159				2
Visualizing and Modeling	31.20	NMS	40.00	NMS	Visualizing and Modeling	157		3		1	153		8		
Representing and	16.50	NMS	42.00	NMS	Representing and	155				6	145				16
Conjecturing and Reasoning	26.67	NMS	45.67	NMS	Conjecturing and Reasoning	156				5	149				12
Proving and Decision	22.25	NMS	31.75	NMS	Proving and Decision	154	6			1	130	29			2
Applying and Connecting	20.75	NMS	40.25	NMS	Applying and Connecting	161					159	2			
Overall	**22.12**	**Needs Major**	**39.42**	**Needs Major**	Overall	161					161				

Annex 3.5

REPORT OF NUMERACY SKILLS PER GRADE LEVEL

ENAT REPORT FOR KEY STAGE 3

BAGAMANOC RURAL D District: BAGAMANOC SOL School Head: MILAGROS V. LIM
MELANIE M. BIEN Division: CATANDUANES Date of Report: 45106

REPORT OF NUMERACY SKILLS PER GRADE LEVEL

PRE-TEST DATA								POST TEST DATA							
Grade 7		Grade 8		Grade 9		Grade 10		Grade 7		Grade 8		Grade 9		Grade 10	
Rating	Skill Level	Rating	Skill Level	Rating	Skill Level	Rating	Skill Level	Rating	Skill Level	Rating	Skill Level	Rating	Skill Level	Rating	Skill Level
25.10	NMS	25.33	NMS	35.69	NMS	21.58	NMS	52.30	NMS	58.67	NMS	40.62	NMS	42.58	NMS
24.28	NMS	19.11	NMS	29.58	NMS	19.00	NMS	54.89	NMS	58.33	NMS	33.25	NMS	40.70	NMS
24.00	NMS	22.00	NMS	28.50	NMS	26.00	NMS	54.00	NMS	74.00	NMS	26.50	NMS	12.00	NMS
28.25	NMS	28.43	NMS	30.43	NMS	31.20	NMS	43.25	NMS	61.57	NMS	34.57	NMS	40.00	NMS
26.40	NMS	35.80	NMS	18.00	NMS	16.50	NMS	50.00	NMS	60.40	NMS	31.00	NMS	42.00	NMS
29.00	NMS	21.00	NMS	28.50	NMS	26.67	NMS	46.25	NMS	62.33	NMS	31.00	NMS	45.67	NMS
26.00	NMS	18.60	NMS	28.75	NMS	22.25	NMS	22.00	NMS	57.20	NMS	31.75	NMS	31.75	NMS
22.71	NMS	25.45	NMS	24.86	NMS	20.75	NMS	38.43	NMS	64.64	NMS	24.43	NMS	40.25	NMS
25.12	Needs Major Support	24.66	Needs Major Support	29.72	Needs Major Support	22.12	Needs Major Support	49.28	Needs Major Support	60.84	Needs Major Support	33.50	Needs Major Support	39.42	Needs Major Support

Annex 3.6
COPY OF APPROVED ACTION PLAN, MATHEMATICS DEPARTMENT

Republic of the Philippines
Department of Education
REGION V
BAGAMANOC RURAL DEVELOPMENT HIGH SCHOOL
Bagamanoc, Catanduanes

ACTION PLAN
MATHEMATICS Department
SY 2023-2024

OBJECTIVES	ACTIVITIES	TIMELINE	PERSONS INVOLVED	RESOURCES		EXPECTED OUTPUT	REMARKS
				Material/Financial	Budget Source		
1. To improve the Math basic skills of the learners.	Conduct Math remediation to selected learners through " Project WIN : Well-Paced Intervention for Numeracy", focusing on the least learned skills of the students as shown in ALNAT Results last SY 2022-2023.	November 2023 – May, 2024	All 4 Junior High School Math Teachers and 4 Senior High School Math Teachers, Head Teachers, Principal, and the identified learners who needs Math intervention.	Laptop Printing Materials Coupon bonds Worksheets Chairs and tables	MOOE Solicitations	At least 90% of the identified learners should pass their current grade level and get promoted.	The result of ALNAT for SY 2022-2023 will serve as our base line in identifying the least learned skills that we will give to our identified learners during our Math Remedial Classes and some other topics that the subject teacher consider to be the students' weakness.
2. To develop and enhance the performance of learners in Math subject.	Conduct 1 day Math Camp focusing on the least learned skills of the students as shown in ALNAT Results last SY 2022-2023.	January, 2024	All Math teachers All Math Club Officers	Laptop Printing Materials Coupon bonds Worksheets Chairs and tables Activity Realia	MOOE Solicitations	Apply the problem-solving skills of the learners to real life situations through interactive games and activities.	The result of ALNAT for SY 2022-2023 will serve as our base line in identifying the least learned skills that we will give to our identified learners during our Math Remedial Class.
3. Participate in 2023-2024 Math Contests	Division Math Patiribayan	SY 2023-2024	All Math Teachers Selected student-participants.	Math reviewers Worksheets Students' fare and food allowance	MOOE Solicitations	Let the students participate and win their respective contests.	Select student participant in advance to give ample time to review.

BAGAMANOC RURAL DEVELOPMENT HIGH SCHOOL
Magsaysay Street, Sta. Teresa
Bagamanoc Catanduanes
Email: 302072@deped.gov.ph

Republic of the Philippines
Department of Education
REGION V
BAGAMANOC RURAL DEVELOPMENT HIGH SCHOOL
Bagamanoc, Catanduanes

Prepared by:

MARK EFREN S. TAYAS JR.
Teacher I / Chairman – Math Department

Received by:

ERWIN G. DE JESUS
Master Teacher I

AILEEN JOY C. VILLAFUERTE
Teacher I

MELANIE M. BIEN
Teacher II

MARY GRACE M. VALERIO
Teacher III

THELMA C. BORJA
Teacher III

MARILOU O MAGTAGNOB
Teacher I

LANIE C. CAPISTRANO
SST-I

Noted:

JENNY E. CABRERA
Head Teacher III

Approved:

MILAGROS V. LIM
School Principal II

BAGAMANOC RURAL DEVELOPMENT HIGH SCHOOL
Magsaysay Street, Sta. Teresa
Bagamanoc Catanduanes
Email: 302072@deped.gov.ph

Annex 3.7
COPY OF APPROVED PROPOSAL
"BRDHS MATH FAIR SY 2023 – 2024"

Department of Education
REGION V
SCHOOLS DIVISION OFFICE OF CATANDUANES
BAGAMANOC RURAL DEVELOPMENT HIGH SCHOOL
Bagamanoc, Catanduanes

PROJECT PROPOSAL

Project Title: BRDHS - MATH FAIR, SY 2023-2024
Project Time – Frame: January 6, 2024
Name of Proponent: ERWIN G. DE JESUS

I. Project Contacts

Name	Position	Project Role	Contact Number
Erwin G. de Jesus	Master Teacher I	Project proponent - will be the overall in- charge of the progress of the activities until the end of the project; responsible for making the reports/narratives.	09212536280 erwin.dejesus @deped.gov.ph
Jenny E. Cabrera	Head Teacher III	Project Evaluator will be responsible for evaluating the process of the activity and will serve as coach/mentor and adviser as well.	09286737449 jenny.cabrera001 @ deped.gov.ph
Melanie M. Bien	Teacher II	Project member will help in implementing the project, specifically in the conduct of Learning by Station.	09471814690 melanie.molina003 @deped.gov.ph
Thelma C. Borja	Teacher III	Project member will help in implementing the project, specifically in the conduct of Learning by Station.	09308130104 thelma.borja @deped.gov.ph
Lanie C. Capistrano	Special Science Teacher I	Project member will help in implementing the project, specifically in the conduct of Learning by Station.	09207693283 laniecapistrano004 @deped.gov.ph
Mary Grace M. Valerio	Teacher III	Project member will help in implementing the project, specifically in the conduct of Learning by Station.	09307020030 maygrace.valerio001 @deped.gov.ph
Aileen Joy C. Villafuerte	Teacher I	Project member will help in implementing the project, specifically in the conduct of Learning by Station.	09090873751 aileenjoy.villafuerte @deped.gov.ph
Mark Efren S. Tayas Jr.	Teacher I	Project member will help in implementing the project, specifically in the conduct of Learning by Station.	09308431550 markefren.tayas @deped.gov.ph
Milagros V. Lim	Principal II	Project Evaluator will be responsible for evaluating the process of the activity and will serve as coach/mentor and adviser as well.	09998762562 milagros.lim001 @deped.gov.ph

II. Project Summary

The Mathematics Department of Bagamanoc RDHS continuously looked for avenues on how to improve the performance of its students through activities that could enhance their Mathematical Skill level. This proposed Math Fair is expected to address some of the least learned skills of the students as identified by the results of ALNAT, 2023.

This one-day Math Fair has two major parts, the "Learning by Station" and the Math Showcase portion. For the first part which is "Learning by Station", the learners will have actual application of their knowledge of the two identified least learned skill in Mathematics namely understanding the basic operation on integers and fraction, and the conduct of actual measurement and applications of the concept on finding the area, perimeter, and volume of an object. It is also the intention of this activity to select qualified contestants for the upcoming Municipal and Division Math Fair in January 13-14, 2024.

III. Project Background

Included in the approved Action Plan of Mathematics Department for SY 2023-2024 is the conduct of at least one-day Math Camp that will focus on enhancing the least learned skills of the students as shown in the ALNAT results last SY 2022-2023. Aside from the usual Math Remedial Classes that we do in the department, the mathematics teachers decided to pursue this one-day event as agreed on the meeting with the department head held last December 14, 2023 with the presence of all Math teachers both in JHS and SHS.

On the other hand, the Schools Division Office of Cabadbaran released a memorandum through the Curriculum Implementation Division which is Division Memo No. 518, S. 2023 re: "2023 Division Math Fair" in consonance with Regional Memo No. 657, S. 2023 and Regional Memo No. 750 s. 2023 with the theme "Developing MATHinking Learners". The 2 day activity consists of contests such as Mathdalaw, e- modulo Art Design, Math Showcase (device, games, puzzle) , and Math Quiz. To maximize this proposed One-Day Math Fair here in our school, Math teachers of BRDHS decided to conduct "Learning by Station" open to all Junior High School Students of BRDHS from grades 7 to 10. In the afternoon, the students will showcase and present their innovations (Math device, games, puzzle) where the possible representatives of the school for the upcoming contests (Municipal and Division Math Fair) will be selected.

IV. Project Objectives

This one-day Math Fair aims to achieve the following objectives:

1. Improve the students understanding on the basic operation on integers and fractions;
2. Let the students conduct actual measurement and applications of the concept on finding the area, perimeter and volume of an object;
3. Develop students' creativity by letting them present their simple inventions of Math device, puzzle, games.
4. Select students that will represent the school in the upcoming Division Math Fair scheduled on January 13-14, 2024.

The content of this one-day Math event focused on enhancing the least learned skills of the students as shown in ALNAT results last SY 2022-2023. This activity also aims to select possible participants who will represent the school in the Municipal/ Division Math Fair.

V. Project Methodology

This one-day Math fair is composed of two parts, the "Learning by Station" and the Math Showcase.

I. Learning By Station

The students will be grouped by Grade Level, and each grade level will be divided into two groups. One-hour actual application of knowledge in Mathematics will be discussed covering the following specific topics:

Station 1 – Basic Operations on Integers and Fraction

Station 2 – Actual Application of Measurements/ Estimation

a. Area

b. Perimeter

c. Volume

The table below will be the schedule of "Learning by Station":

Time	Station 1	Station 2
7:30 – 8:30	Grade 7 A	Grade 7 B
8:30 – 9:30	Grade 7 B	Grade 7 A
9:30 – 10:30	Grade 8 A	Grade 8 B
10:30 – 11:30	Grade 8 B	Grade 8 A
1:00 – 1:30	Grade 9 A	Grade 9 B
1:30 – 2:00	Grade 9 B	Grade 9 A
2:00 – 2:30	Grade 10 A	Grade 10 B
2:30 – 3:00	Grade 10 B	Grade 10 A
3:00 – 4:00	Math Showcase	
4:00 – 4:30	Closing/ Awarding	

II. **Math Showcase**

All students from both Junior High School and Senior High School are included in this part of activity. They were informed ahead of time to prepare for their intervention focusing on developing the learners' skills in Mathematics through games, device, and puzzle.

A short lecture will be given to the learners before they present their work. The mechanics in determining the winners is adapted from the contest guidelines provided by the Region and the Division Office.

A. Work Breakdown and Task Time Estimates

Task/Activity	Expected Output	Time Frame	Person In-Charge	Recources Needed
Planning on how to conduct the School Math Fair	Come up with specific date of event and finalize the content of the Math Fair	December 14, 2023	Head Teacher, JHS Math Teachers, SHS Math Teachers	Printer, Papers, Pen
Prepare Math Camp Proposal	Have an approved proposal ready for execution	December 15, 2023	Erwin de Jesus (Chairman, Math Dept), Jenny E. Cabrera (HT III), Milagros V. Lim (Principal II), Brenda V. Ullanu (PSDS).	Printer, Papers, Pen
Conduct 2023 Math Fair	Successfully implement the proposed activity as planned	January 5, 2024	BRDHS Students, All Math Teachers from JHS and SHS, School Heads	Power point Presentations, Materials for different activities.
Conduct Post Assessment	Identify the list of winners for Municipal/ Division Level Contest	January 8, 2024	All math teachers	Printer, Papers, Pen

B. Project Risk Management

There are no possible challenges to be met in implementing this project since it is just a simple activity to be conducted inside the school campus. Proper precaution will be always observed while doing different activities to prevent any untoward events.

VI. Project Cost

Every project entails some expenses to be incurred. For this one-day activity, we have a very minimal expected expenses needed.

The table below shows the projected cost of the project.

MATATAG

Table 3.

Projects Costs

Activities	Needed Materials	Costs	Fund Source
Printing of Activity Sheets	coupon bond	P 50. 00	Math Teachers
Printing of Certificates	special paper	P 100.00	Math Teachers
Discussion Proper	Chalk Markers Manila Paper	P100.00	Math Teachers
Total Expected Cost of the project		**P250.00**	

Prepared by:

ERWIN G. DE JESUS
MT – I / Chairman – Math Department

Noted:

JENNY E. CABRERA
Head Teacher III

Recommending Approval:

MILAGROS V. LIM
Principal II

Approved:

BRENDA V. VILLAREY
PSDS – Bagamanoc South/ North District

BAGAMANOC RURAL DEVELOPMENT HIGH SCHOOL
Magsaysay Street, Sta. Teresa
Bagamanoc Catanduanes
Email: [illegible]

Annex 3.8
COPY OF COMPLETION REPORT
"BRDHS MATH FAIR SY 2023 – 2024"

PROGRAM COMPLETION REPORT

Program Title:	"BRDHS - MATH FAIR, SY 2023-2024"			
Facilitator(s):	**Name**	**Position**	**Project Role**	**Contact Number**
	Erwin G. de Jesus	Master Teacher I	Project proponent - will be the overall in- charge of the progress of the activities until the end of the project; responsible for making the reports/narratives.	09212526280 erwin.dejesus @deped.gov.ph
	Jenny E. Cabrera	Head Teacher III	Project Evaluator; will be responsible for evaluating the process of the activity and will serve as coach/mentor and adviser as well.	09286737449 jenny.cabrera001 @ deped.gov.ph
	Melanie M. Bien	Teacher II	Project member will help in implementing the project, specifically in the conduct of Learning by Station.	09471814890 melanie.molina003 @deped.gov.ph
	Thelma C. Borja	Teacher III	Project member will help in implementing the project, specifically in the conduct of Learning by Station.	09308130104 thelma.borja @deped.gov.ph
	Lanie C. Capistrano	Special Science Teacher I	Project member will help in implementing the project, specifically in the conduct of Learning by Station.	09207893283 laniecapistrano004 @deped.gov.ph
	Mary Grace M. Valerio	Teacher III	Project member will help in implementing the project, specifically in the conduct of Learning by Station.	09307020030 marygrace.valerio001 @deped.gov.ph
	Aileen Joy C. Villafuerte	Teacher I	Project member will help in implementing the project, specifically in the conduct of Learning by Station.	09090873751 aileenjoy.villafuerte @deped.gov.ph
	Mark Efren S. Tayas Jr.	Teacher I	Project member will help in implementing the project, specifically in the conduct of Learning by Station.	09308431550 markefren.tayas @deped.gov.ph
	Milagros V. Lim	Principal II	Project Evaluator; will be responsible for evaluating the process of the activity and will serve as coach/mentor and adviser as well.	09998782562 milagros.lim001 @deped.gov.ph
Location and Venue:	**Bagamanoc Rural Development High School** *Bagamanoc, Catanduanes*			
Duration:	One-Day only			
Date:	January 5, 2024			

No. of Participants

Grade/Section	Male	Female	Total
7 Mahinahon	17	22	39
7 Mahinhin	9	8	17
7 Mahait	12	10	22
8 Matapat	3	19	22
8 Maaasahan	16	8	24
8 Magalang	6	4	10
9 Managmahal	12	25	37
9 Masinop	14	7	21
9 Matipid	13	7	20
10 Manamaraan	10	6	16
10 Managpakumbaba	9	8	17
10 Masipag	15	23	38
10 Matatag	9	10	19
Total	**145**	**157**	**302**

Summary of Attendance	*(Attach attendance Sheets (Attachment 2))*
Executive Summary Program Objectives	The following were the objectives of the program: 1. Improve the students understanding on the basic operation on integers and fraction; 2. Let the students conduct actual measurement and applications of the concept on finding the area, perimeter and volume of an object; 3. Develop students' creativity by letting them present their simple inventions of Math device, puzzle, games. 4. Select students that will represent the school in the upcoming Division Math Fair scheduled on January 13-14, 2024.
Program Schedule /Matrix/ Design	I. Learning By Station The students will be grouped by Grade Level, and each grade level will be divided into two groups. One-hour actual application of knowledge in Mathematics will be discussed covering the following specific topics: Station 1: Basic Operations on Integers and Fraction Station 2: Actual Application of Measurements/ Estimation a. Area b. Perimeter c. Volume The table below will be the schedule of "Learning by Station":

Time	Station 1	Station 2
7:30 – 8:30	Grade 7 A	Grade 7 B
8:30 – 9:30	Grade 7 B	Grade 7 A
9:30 – 10:30	Grade 8 A	Grade 8 B
10:30 – 11:30	Grade 8 B	Grade 8 A
1:00 – 1:30	Grade 9 A	Grade 9 B
1:30 – 2:00	Grade 9 B	Grade 9 A
2:00 – 2:30	Grade 10 A	Grade 10 B
2:30 – 3:00	Grade 10 B	Grade 10 A
3:00 – 4:00	Math Showcase	
4:00 – 4:30	Closing/ Awarding	

Key Results	*The following are the key results of this one-day activity:* 1. The learners were able to have learnings outside the normal classroom setting. 2. The participants were able to apply the actual applications of their basic Math skills like the concept of area, volume, measurements, and basic conversion of units. 3. The school were able to select the participants in the upcoming Municipal Math Fair on January 9, 2024.

Event	Contestant/s	Coach
Math Quiz(Gr. 10)	Mary Joy Villarey	Melanie Bien
Math Quiz (Gr.12)	Joela Mae Corpuz	Lanie Capistrano
Math Puzzle	Charles Fajardo Quency Sunguad	Erwin de Jesus
E-Modulo Art	Kim Joe Carloto	Aileen Joy Villafuerte

Resources/Materials	• Printer, Papers, Pen, certificates • Power Point Presentations • Materials for different activities *Station1:* Meter sticks, colored paper, plywood, marker, activity sheets, scissors, ruler, metro *Station 2:* Weighing scale, water, pail, baskula, Whiteboard, markers, measuring cups
M&E Analysis	The following are the proof of learning of the participants which is an indicator of the success of the program: • The reflections of the students show that they learned a lot on the different topic discussed, particularly on the actual applications of Math concepts using realia. • Feedbacks given to the participants during discussions and applications helped in making the learning more meaningful. • The students' sample outputs on making Math device, games and puzzles are proof of learnings.

General Comments and Issues Encountered	• Its delivery o Trainers/facilitators were organized in executing the different activities involved in the project. o Participants- All sections from grade 7 to 10 were all represented and they actively participated in the different activities done. o Content of program- The program was designed so the learners can have actual applications of what they learned inside the classroom and this was successfully achieved. o Training Materials – Materials needed in this Math Fair were all prepared ahead of time which made the activities more meaningful. • Its management o Prior to delivery – Two sets of meeting was done ahead in preparation to this Math Fair which made the event successful. o During the training proper – The support of all Math teachers and school heads make this Math fair more easier to execute.
Recommendations	The Mathematics Department would like to recommend that this Math Fair should be done yearly, and the number of days should be increased from 1 day to at least 2 days to give more time for the students to perform more activities.
Financial Report	

Activities	Materials Used	Costs	Fund Source
Printing of Activity Sheets	coupon bond	P 50. 00	Math Teachers
Printing of Certificates	special paper	P 100.00	Math Teachers
Discussion Proper	Chalk Markers Manila Paper	P100.00	Math Teachers
Total Cost of the project		P250.00	

Republic of the Philippines
Department of Education
REGION V
SCHOOLS DIVISION OFFICE OF CATANDUANES

Program Report Attachments	
Attachment 1	List of Participants
Attachment 2	Attendance Sheet (arranged chronologically)
Attachment 3	M&E Results
Attachment 4	Breakdown of Expenditures
Attachment 5	Photo Documentation

Prepared by:

ERWIN G. DE JESUS
MT – I / Chairman – Math Fair 2023

Noted:

JENNY E. CABRERA
Head Teacher III

Recommending Approval:

MILAGROS V. LIM
Principal II

Approved:

BRENDA V. VILLAREY
PSDS – Bagamanoc South/ North District

Annex 3.9
COPY OF SAMPLE MATH GAME/ PUZZLE

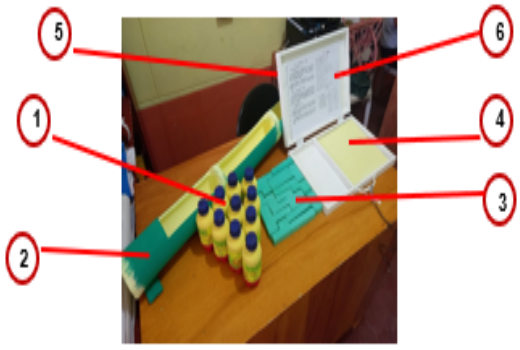
INTRODUCTION

The data collected in the 2022-2023 post-test in ALNAT were interpreted, analyzed, and shared to us, the students, by our Math 10 teacher which prompted us to do something as responsible learners. The ALNAT, an electronic tool with pre-existing questionnaires & results' interpretations, includes questions which covers DepEd's MELC. This ALNAT is a numeracy assessment tool validated by the University of the Philippines National Institute of Science and Mathematics Education (UPNISMED) and the Bicol University College of Education (BUCE) collaborated with content and IT experts in the Division of Albay and other agencies.

The results for the Grade 10 students revealed that their post-test rating is only 39.42% which means that the learners are under the numeracy skill level that "Needs Major Support". This is an increase of 17.3% compared to their pre-test rating which is only 22.12%. However, this rating is way too far to get into the next numeracy skill level which is "anchoring" which needs a rating of 75 to 79 percent. The results further revealed that the Grade 10 learners' the top tree least learned skills are estimating (12.00%), proving and decision making (31.75%), and visualizing and modelling (40.00%).

This is the reason why we decided to focus on skills that has something to do with ESTIMATION and make the learning more fun by integrating it to PUZZLE, thus, "**JIG$-TTLE PUZZLE**" was created. The term "Jigs-ttle" came from two words – Jigsaw and Bottle which are the main component of the puzzle. Jigsaw means to assemble interlocking shape of pieces of wood while bottle are the recycled plastic bottles that will be used as part of the puzzle.

THE PARTS OF "JIG$-TTLE PUZZLE"



1. **Puzzle Bottles**

The "Jigs-ttle Puzzle" consists of 10 pieces of recycled Puzzle Bottles which contains identical one-peso coins from one peso to ten pesos.

2. **Puzzle Bottle's Stand**

The puzzle bottle's stand is made of bamboo where the bottles are placed while they are being arranged.

3. **Puzzle's Wooden Maze**

The "Jigs-ttle Puzzle" consists of 16 pieces of puzzle's wooden maze, 8 of which are decoys or not a part of the solution of the puzzle.

4. **The Puzzle Marker**

The puzzle marker is a rectangular marker that is permanently placed inside the "Jigs-ttle Puzzle's box" where the pieces of selected puzzle's wooden maze will be arranged or fixed.

5. **The Jigs-ttle Puzzle's Box**

The main purpose of this box is to properly keep and secure all the parts of the Jigs-ttle puzzle. To maximize its purpose, it is also inside this box where you can find the puzzle marker where the pieces of the puzzle will be arranged.

6. **The Jigs-ttle Puzzle's Guide and Questionnaire**

The guide on how to use the puzzle and the questionnaire is placed permanently on the puzzle's box for easy reference.

HOW TO PLAY THE "ESTIMAZING PUZZLE"

THE ESTIMATION SKILLS TEST

1. Organize the puzzle bottles from 1 – 10 using the player's sense of hearing and the bottle's weight. Each bottle holds coins ranging from 1 piece to 10 pieces or 1 peso to 10 pesos. Organize them in ascending order from left to right, with one peso on the left to 10 pesos on the right.
2. To verify the accuracy of the answer and proceed to the next step, the word "estimation" should be visible when the bottles are flipped. Otherwise, the player must honestly start again by rearranging the bottles and repeat the process.

THE MATHEMATICAL SKILLS TEST

3. Every letter in the word "estimation" corresponds to a mathematical question. The player must answer each question correctly and then locate the corresponding answer within the wooden puzzle maze with ten correct puzzle pieces. Be cautious, as the maze contains decoys, requiring careful consideration in answering the questions.

THE FINAL PUZZLE TEST

4. Once you've gathered the correct final 10 puzzle pieces, arrange them within the puzzle marker to form a square shape. When you flip the correctly organized puzzle, a mathematical symbol should be visible to confirm the accuracy of the answer.

Hint: To estimate is to approximate. The symbol that must be formed is the mathematical symbol for the word "approximately".

Goodluck!

THE COMPETENCY BEING ADDRESSED AND HOW IT CAN BE ADDRESSED

The ALNAT results for SY 2022-2023 helped us determine the numeracy skills that we want to focus on for this puzzle, and that is ESTIMATION. This is the least mastered Math skills of Grade 10 students last school year, and we were challenged to do something to improve our learning while enjoying and focusing on estimation. The first part of the puzzle which is "The Estimation Skills Test" aims to help improve the sense of estimation of the learners using their sense of touch and sense of hearing. Sometimes, we neglect to use our God-given skills to solve simple problems, even the most basic ones. Correctly arranging the pieces of bottles will surely challenge the learner's estimation skills while enjoying the process.

The questions that we used for the second part of the puzzle which is "The Mathematical Skills Test" are topics on SEQUENCE. We would like to master the different subtopics therein like the arithmetic sequence and geometric sequence by answering questions related to the topic. Mastery could only happen if we continue to learn and practice on specific competency that we like to focus on. One good thing about this puzzle is that we can change the questions as well depending on the competency that you wish to master.

On the third and final part of the puzzle which is "The Final Puzzle Test" the learner is expected to improve their "Visualizing and Modelling Skills" since in this part of the puzzle the player must be able to correctly put the pieces together to form a square and to ultimately reveal the correct image found on the reverse-side of each piece of the wooden puzzle.

THE EXPECTED IMPACT OF THE ESTIMAZING PUZZLE

There are three major impacts that we would like to achieve by playing this Jigs-ttle Puzzle:

1. Improve the **Sense of Estimation** among learners/ players of the puzzle.
2. Master the concept of **SEQUENCE** by correctly answering the given questions.
3. Level-up the **Visualizing and Modelling Skills** of the learners by putting together the correct pieces of the puzzle.

Annex 4
COPY OF PARENTAL CONSENT

Republic of the Philippines
Department of Education
REGION V
SCHOOLS DIVISION OFFICE OF CATANDUANES
BAGAMANOC RURAL DEVELOPMENT HIGH SCHOOL
Magsaysay St. Sta. Teresa, Bagamanoc, Catanduanes

PARENTAL CONSENT

I hereby allow my child ERICA E. CABRERA, Grade 9 Mapagmahal, to participate voluntarily in the conduct of an Action Research titled "ASSESSING MATHEMATICAL COMPETENCE OF JUNIOR HIGH SCHOOL STUDENTS AT BAGAMANOC RDHS: BASIS FOR INTERVENTION" for school year 2023 – 2024.

I was informed about the benefits and impacts of the study to the school and to the learners, and that my child's participation will not affect his/ her studies.

I understand that my child's personal information will remain confidential, and that I may withdraw his/ her participation to this research anytime I wanted to even after signing this consent.

I further understand that the information gained in this study will be published as explained while maintaining the anonymity of my child.

Cabrera
EDEN E. CABRERA — 01/04/2024
Parent's / Guardian's Name Over Signature — *Date*

I certify that I have explained the study to the student-participant and consider that she/ he understands what is involved and freely consents to participation.

ERWIN G. DE JESUS — January 4, 2024
Researcher's Name Over Signature — *Date*

Email: [redacted]
School ID No. 322072
Address: Magsaysay St. Sta. Teresa, Bagamanoc, Catanduanes

Annex 5
APPROVED LETTER REQUEST FROM THE SCHOOL PRINCIPAL

Republic of the Philippines
Department of Education
REGION V
SCHOOLS DIVISION OFFICE OF CATANDUANES
BAGAMANOC RURAL DEVELOPMENT HIGH SCHOOL
Magsaysay St. Sta. Teresa, Bagamanoc, Catanduanes

January 4, 2024

MILAGROS V. LIM
Principal II
This School

Madam:

The undersigned is currently conducting an Action Research funded by Basic Education Research Fund (BERF) titled "ASSESSING MATHEMATICAL COMPETENCE OF JUNIOR HIGH SCHOOL STUDENTS AT BAGAMANOC RDHS: BASIS FOR INTERVENTION" for School Year 2023 – 2024. This research aims to determine the least mastered skills of our learners in Mathematics which will then be the basis for inventions to help increase their performance.

In this regard, may I request for your approval on the use of the results of our school's ALNAT for SY 2022- 2023. Rest assured that the data on the said test will be solely used for the purpose this research and that the anonymity of the learners involved will be kept secured and confidential.

Thank you for your continued support in uplifting the quality of education through research. God bless.

Very truly yours,

ERWIN G. DE JESUS
Mathematics Teacher/ Researcher

Approved:

MILAGROS V. LIM
Principal II

Email:
School ID No. 302072
Address: Magsaysay St. Sta. Teresa, Bagamanoc, Catanduanes

Annex 6
COPY OF MOA
Memorandum of Agreement

MEMORANDUM OF AGREEMENT

KNOW ALL PERSONS BY THESE PRESENTS:

This Agreement was made and entered into this 2nd day of January 2024 in Legazpi City by and between:

ERWIN G. DE JESUS, Bagamanoc Rural Development High School, Schools Division Office of Catanduanes hereinafter referred to a **"SECOND PARTY"**.

-and-

DepED – Regional Office V (DepED ROV), with a principal office and postal address at Rawis, Legazpi City hereinafter referred to as **"FIRST PARTY"**, represented in this Agreement by its Director IV, Office of the Regional Director, **GILBERT T. SADSAD**.

ERWIN G. DE JESUS and **DepED ROV** shall be collectively referred to as **"PARTIES"** and singularly as **"PARTY"**.

WITNESSETH:

WHEREAS, DepED Order No. 43, s. 2015 otherwise known as Revised Guidelines for the Basic Education Research Fund (BERF), DepED is continuing its initiatives towards strengthening evidence-based policy development and decision-making through the provision of research fund to eligible proponents from national, regional, School's Division Offices to public elementary and secondary schools nationwide. Funds shall come from the Fiscal Year (FY) 2024 General Appropriation Act-Basic Education Research Fund (GAA-BERF) and succeeding years thereon.

WHEREAS, to promote the culture of research, eligible proponents shall utilize the research fund for research projects anchored on the following thematic areas:

a. Improving Access to Education;

b. Improving the Quality of Education; and

c. Improving Governance.

WHEREAS, the **FIRST PARTY,** in furtherance of the provisions found in DepED Order No. 16, s. 2017, commits to select eligible proponents based on criteria as provided for under the same DepED Order and provide appropriate funds for the conduct of the research;

WHEREAS, the **FIRST PARTY** grants the **SECOND PARTY** to conduct research entitled **"ASSESSING MATHEMATICAL COMPETENCE OF JHS STUDENTS AT BAGAMANOC RDHS: BASIS FOR INTERVENTION".**

WHEREAS, the **SECOND PARTY** has agreed to fulfill the terms and conditions set forth in this Agreement to achieve the objectives of DepED Order No. 16, s. 2017

NOW, THEREFORE, for and in consideration of the foregoing premises, the **PARTIES** hereto mutually agreed to undertake the following:

SECTION 1
OBJECT OF THE AGREEMENT

Section 1 The Qualifications of prospective proponents must adhere to the provisions of DepED Order No. 16, s. 2017.

SECTION 2
ROLES AND RESPONSIBILITIES OF THE PARTIES

Section 2.1 Roles and Responsibilities of the FIRST PARTY (DepED ROV).

2.1.1 To give necessary information to the prospective proponents.

2.1.2 To conduct an orientation with regard to the availment of the BERF with the prospective proponents.

2.1.3 To conduct a selection process pursuant to DepED Order No. 16, 2017 and other means as maybe deemed necessary and/or incidental to the implementation of the said DepED Order.

2.1.4. To monitor the compliance of the qualified proponents.

2.1.5. To process the research paper submitted by the prospective proponents by setting standards as provided for under DepED Order No. 16, s. 2017; and,

2.1.6. To release the research fund to the Second Party in the amount of Fifteen Thousand Pesos Only (PhP 15, 000.00).

Section 2.2 Roles and Responsibilities of the SECOND PARTY (Employee).

2.2.1. To comply with all the requirements set forth under DepED Order No. 16, s. 2017.

2.2.2. To personally receive the research fund.

2.2.3. To complete the research work as provided for under Section 4.2 of this Agreement.

2.2.4. To refund the full amount granted through direct payment or salary deduction within six (6) months in case the research work has not been completed on the duration as found under Section 4.2 of this Agreement, except in case of death, wherein the second party is not required to refund the amount already releases to him/her, as this Agreement shall be automatically terminated.

SECTION 3
OWNERSHIP AND AUTHORSHIP OF THE RESEARCH PAPER

It is clearly understood, on the part of the **SECOND PARTY** that:

Section 3.1. That he will be the sole author of the research.

Section 3. 2. The study funded under BERF will be co-owned by the author and DepEd, thus, will be subject to the following restrictions:

a. Written permission from the National and Regional Research Committee is required before presentation in research conferences, forums and other related events, or its publication in research journals and bulletins.

b. Presentations and/or publications must duly acknowledge the funding source/s of the study.

SECTION 4
EFFECTIVITY/DURATION

Section 4.1 This Agreement shall be effective on the date of signing hereof.

Section 4.2 For Applied Research the duration is one (1) year, while for Action Research, six (6) months.

Failure on the part of the **SECOND PARTY** to strictly comply with any of the terms and conditions of this Agreement and under DepED Order No. 16, s.

2017 without just cause shall constitute a ground for the termination of this Agreement.

As a result, thereof, the **SECOND PARTY** shall refund the whole amount extended by the **FIRST PARTY** and can no longer be entitled to participate in any call for research sponsored by DepED.

Either **PARTY** may terminate this Agreement anytime for causes other than the violation of the terms and conditions stipulated herein, provided that a written notice thereof shall be served upon the other **PARTY** at least thirty (30) days prior to the intended effectivity date of termination.

SECTION 5
NON-WAIVER OF RIGHTS

The failure of any **PARTY** to insist upon the strict performance of any of the terms, conditions and covenants hereof, shall not be deemed as relinquishment or waiver of any right or remedy granted to such **PARTY** nor shall it be construed a waiver of any subsequent default of the covenants which shall continue to be in full force and effect. No waiver of any rights or remedies under this Agreement shall be deemed to have been made unless expressed in writing by the concerned **PARTY**.

SECTION 6
COMPLETE AGREEMENT

This Agreement constitutes the complete agreement and sets forth the entire understanding and agreement of the **PARTIES** as to the subject matter of this Agreement and supersedes all prior discussions and understandings in respect of the subject of this Agreement, whether written or oral.

SECTION 7
AMENDMENTS

No amendments, modification, or supplement to the terms of this Agreement shall be valid and effective unless agreed upon in writing and signed by the **PARTIES**.

SECTION 8
GOVERNING LAW

This Agreement shall be governed by and construed in accordance with the Laws of the Republic of the Philippines, DepED Order No. 16, s. 2017 and other allied DepED Issuances.

SECTION 9
SEPARABILITY CLAUSE

In the event that any provision of this Agreement is held invalid or contrary to law, the validity of the other terms and conditions hereof shall not be affected thereby.

IN WITNESS WHEREOF, the **PARTIES** have hereunto set their hands this ____ day of JAN 30 2024.

DepED Regional Office V
by:

GILBERT T. SADSAD
Regional Director

SDO – CATANDUANES
by:

ERWIN G. DE JESUS
Researcher

SIGNED IN THE PRESENCE OF:

BEBIANO I. SENTILLAS
Assistant Regional Director

ROY T. BAÑAS
Co-Chair, RRC

ERWIN G. DE JESUS

ROY T. BAÑAS

BEBIANO I. SENTILLAS

GILBERT T. SADSAD

Republic of the Philippines)
) ss.

ACKNOWLEDGEMENT

BEFORE ME, a Notary Public in and for the City of Legazpi, **ERWIN G. DE JESUS** and **GILBERT T. SADSAD**, who are known to me to be the same persons who executed and voluntarily signed the foregoing Contract of Service for research entitled, **"ASSESSING MATHEMATICAL COMPETENCE OF JHS STUDENTS AT BAGAMANOC RDHS: BASIS FOR INTERVENTION"** which they acknowledged before me as their free and voluntary act and deed.

Parties	Identification Card	Issued By
ERWIN G. DE JESUS	1105659	PRC, Manila
GILBERT T. SADSAD	P-9190396B	DFA

The foregoing Contract of Service consisting of six (6) pages including this page on which the acknowledgment is written has been signed on the left margin of each and every page by the parties and the witnesses.

WITNESS MY HAND AND SEAL, on the date and place above-written. JAN 30 2024

ATTY. FREDERICO A. GUANAN, JR.
NOTARY PUBLIC
Commission Expires on 31.2024
PTR No. [illegible] 1/3/24, Virac, Catanduanes
MCLE Compliance No. VII-0022617 dtd July 19,2022
IBP Lifetime Member No.011209
Attorney's Roll No.40666

Doc No. 433
Page No. 87
Book No. 401
Series of 2023.

Annex 7
COPY OF RECEIPTS

MEACO ROYAL HOTEL, INC.

Peñaranda St., Oro Site Legazpi City, Albay
VAT Reg. TIN: 009-358-430-006

No. 05974

OFFICIAL RECEIPT

Date Dec. 04, 05, 2023

RECEIVED from Erwin G. De Jesus with TIN ______
and address at Bagamanoc, Catanduanes engaged in the
buss. style of ______ The sum of One thousand four hundred pesos (P 1400)
partial/in full payment for Room Accommodation

IN PAYMENT OF THE FF:	
PARTICULARS	AMOUNT
VATABLE SALES	
VAT EXEMPT SALES	
VAT ZERO - RATED SALES	
VAT AMOUNT	
Total Sales (VAT Inclusive)	1250
Less VAT	150
TOTAL	
Less SC/PWD Disc.	
TOTAL DUE	
Less: Withholding Tax	
TOTAL AMOUNT	
ADD: VAT	
Total Amount Due	1400
FORM OF PAYMENT	
CASH	
CHECK	
CHECK No.	

Sr. Citizen TIN:
OSCA/PWD I.D No.: Signature:
BY: Cashier/Authorized Representative

THIS OFFICIAL RECEIPT SHALL BE VALID FOR FIVE (5) YEARS FROM THE DATE OF ATP

ONE STOP SARI-SARI STORE

Osmena Poblacion, Bagamanoc, Catanduanes
Rodel C. Velchez-Prop. Non-VAT Reg. TIN: 774-845-486-00000

SALES INVOICE

Sold to: Erwin De Jesus Date: 4/14/24
TIN: ______ Terms: ______
Address: ______ OSCA/PWD ID No.: ______
Card holder's Signature: ______
Business Style: ______

QTY.	UNIT	ARTICLES	UNIT PRICE	AMOUNT
		Assorted goods		629
			Total Sales	
			Less: SC/PWD Discount	
			TOTAL AMOUNT DUE	629

Cashier/Authorized Representative

"This document is not valid for claim of input tax"

No. 000891

EDEN'S STORE

Magsaysay St., Santa Teresa, 4807 Bagamanoc, Catanduanes, Philippines
EDEN V. SAN GASPAR - Prop. NON VAT Reg. TIN 183-767-644-00000

SALES INVOICE

Sold to: Erwin De Jesus Date: 04/14/24
TIN: ______ Terms: ______
Address: San Rafael OSCA/PWD ID No.: ______

QTY.	UNIT	ARTICLES	UNIT PRICE	AMOUNT
		School Supplies		1135
			Total Sales	
			Less: SC/PWD Discount	
			TOTAL AMOUNT DUE	1135

Nº 016640

Cashier/Authorized Representative

"THIS DOCUMENT IS NOT VALID FOR CLAIM OF INPUT TAXES"

RECEIPT

No. ______ Date 04-14-2024

Received from Bagamanoc Guesthouse
the sum of pesos Four Hundred seventy pesos
as payment for Snacks

P 470

Signature

Republic of the Philippines
Department of Education
REGION V
SCHOOLS DIVISION OFFICE OF CATANDUANES
BAGAMANOC RURAL DEVELOPMENT HIGH SCHOOL
Magsaysay St. Sta. Teresa, Bagamanoc, Catanduanes

DISSEMINATION of ACTION RESEARCH
May 31, 2024

Action Research Title: "ASSESSING MATHEMATICAL COMPETENCE OF JUNIOR HIGH SCHOOL STUDENTS AT BAGAMANOC RDHS: BASIS FOR INTERVENTION".

Researcher : **ERWIN G. DE JESUS**

Name of Participant	Position	Signature
[illegible]	T-II	
THELMA C. BORJA	T-III	
[illegible] V. VITANCO	T-[illegible]	
MELANIE M. [illegible]	T-II	
ALMA H. [illegible]	T-I	
[illegible] D. TITO	T-I	
Jeffrey A. Fajardo	T-III	
Janly Rose Navarro	T-I	
Lyka Vallejo	T-I	
[illegible] F. [illegible]	T-III	
Marilyn V. Villarey	T-II	
WENIE T. ARCILLA	T-III	
[illegible] C. Fajardo	T-III	
[illegible] F. VIGO	T-II	
[illegible] ALCANTARA JR	T-II	
Romel V. dela Rosa	T-II	
GEMMA S. CASTRO	T-II	
MILAGROS V. LIM	SP-II	
JENNY G. CABRERA	HT-III	
ALMA A. VILLAFLOR	HT III	
[illegible] M. [illegible]	T-III	
[illegible] T. [illegible]	T-I	
MA CAROL V. ARCILLA	MT-II	
[illegible] T. [illegible]	T-II	
Mark Erwin S. Tayo Jr	T-I	
[illegible] Capistrano	SST-I	
M.V. Pena	T-I	
[illegible] L. [illegible]	T-I	
Mary Grace [illegible]	T-III	
Heaty V. [illegible]	T-I	
CHIRLEY S. VILLAFLOR	T-I	
Jenny Rose Q. Navarro	T-I	
MA. [illegible] T. [illegible]	T-II	

Email: [illegible]@gmail.com
School ID No. 302072
Address: Magsaysay St. Sta. Teresa, Bagamanoc, Catanduanes

Republic of the Philippines
Department of Education
REGION V
SCHOOLS DIVISION OFFICE OF CATANDUANES
BAGAMANOC RURAL DEVELOPMENT HIGH SCHOOL
Magsaysay St. Sta. Teresa, Bagamanoc, Catanduanes

DISSEMINATION of ACTION RESEARCH
May 31, 2024

Action Research Title: "ASSESSING MATHEMATICAL COMPETENCE OF JUNIOR HIGH SCHOOL STUDENTS AT BAGAMANOC RDHS: BASIS FOR INTERVENTION".

Researcher : **ERWIN G. DE JESUS**

Name of Participant	Position	Signature
Eden P. Alcon	T-III	
AGUINALDO [illegible] O.	T-II	
Mary Ann A. [illegible]	T-I	
[illegible] P. [illegible]	T-II	
HERBERT M. AQUINO	T-III	

EDEN'S STORE
Magsaysay St., Santa Teresa, 4807 Bagamanoc, Catanduanes, Philippines
EDEN V. SAN GASPAR - Prop. NON VAT Reg. TIN 183-767-844-00000
SALES INVOICE

Sold to: Erwin De Jesus Date: 5/31/24
TIN:
Address:
Terms:
OSCA/PWD ID No.:

QTY.	UNIT	ARTICLES	UNIT PRICE	AMOUNT
50	pcs	DM P. Juice	35-	1,750.00
50	pcs	Monde cupcake	12-	600.00
			Total Sales	
			Less: SC/PWD Discount	
			TOTAL AMOUNT DUE	2,350.00

№ 016799

Cashier/Authorized Representative

"THIS DOCUMENT IS NOT VALID FOR CLAIM OF INPUT TAXES"

Email: [illegible]@gmail.com
School ID No. 302072
Address: Magsaysay St. Sta. Teresa, Bagamanoc, Catanduanes

EDEN'S STORE

Magsaysay St., Santa Teresa, 4807 Bagamanoc, Catanduanes, Philippines
EDEN V. SAN GASPAR - Prop. NON VAT Reg. TIN 153-757-344-00000

SALES INVOICE

Sold to: Erwin De Jesus Date: 1/9/24
TIN:
Address:
Terms:
OSCA/PWD ID No.:

QTY.	UNIT	ARTICLES	UNIT PRICE	AMOUNT
5	ream	Copy paper A4		1240.00
			Total Sales	
			Less: SC/PWD Discount	
			TOTAL AMOUNT DUE	1240.00

№ 016851

Cashier/Authorized Representative

"THIS DOCUMENT IS NOT VALID FOR CLAIM OF INPUT TAXES"

ONE STOP SARI-SARI STORE

Osmena Poblacion, Bagamanoc, Catanduanes
Rodel C. Velchez-Prop. Non-VAT Reg. TIN: 774-845-488-00000

SALES INVOICE

Sold to: Erwin De Jesus Date: 4/17/24
TIN: Terms:
Address: OSCA/PWD ID No.:
Card holder's
Business Style: Signature:

QTY.	UNIT	ARTICLES	UNIT PRICE	AMOUNT
		Assorted goods		603
			Total Sales	
			Less: SC/PWD Discount	
			TOTAL AMOUNT DUE	603

JRL Printing Press & Gen. Mdse.

Cashier/Authorized Representative

"This document is not valid for claim of input tax"

No. 000892